

Course 12: File Upload & Media Handling

■ Overview

Reliable media workflows end-to-end.

■ Prerequisites

- Express / Nest
- React

■ Outcomes

Uploads, processing, secure delivery.

■ Benefits

This course prepares learners to design robust and secure media workflows for modern applications. Students will master file uploads using Multer and streaming approaches, integrate cloud storage solutions like AWS S3 and Cloudinary with presigned URLs, and implement media transformations such as image resizing with Sharp and video streaming with HLS/DASH. The course emphasizes security through signed URLs, expiring links, MIME validation, and antivirus scanning. Learners will also manage temporary storage with cleanup jobs, build React media handling features such as previews, progress bars, and retries, and support large file workflows with chunking and resumable uploads. Additionally, cost optimization strategies with storage classes and lifecycle policies ensure production-ready and sustainable media delivery systems.

■ Training Key Features

- Single and multiple uploads with Multer and streaming
- Cloud storage integration (S3, Cloudinary, presigned URLs)
- Image processing with Sharp and responsive workflows
- Video handling with chunked upload, HLS, and DASH basics
- Secure download delivery with signed and expiring URLs
- Validation for MIME types, file sizes, and antivirus scanning
- Temporary storage management with cleanup strategies
- React media handling (previews, progress bars, retries)
- Large file support with chunking and resumable uploads
- Cost optimization with storage classes and lifecycle rules

■ Module Breakdown

- Module 1 – Uploads ::: single && multiple && Multer && streaming
- Module 2 – Cloud Storage ::: S3 && Cloudinary SDKs && presigned URLs
- Module 3 – Image Processing ::: Sharp basics && responsive images
- Module 4 – Video Handling ::: chunked uploads && HLS && DASH overview
- Module 5 – Secure Downloads ::: signed URLs && expiring links

- Module 6 – Validation ::: MIME sniffing && size limits && antivirus scanning
- Module 7 – Temporary Storage ::: tmp dirs && cleanup jobs
- Module 8 – React Media ::: previews && progress bars && retries
- Module 9 – Large File Handling ::: chunking && resumable uploads
- Module 10 – Cost Optimization ::: storage classes && lifecycle management